Or y_A est croissante $\Rightarrow \cos(\omega\theta+\varphi_A)>0$

$\Rightarrow \omega\theta+\varphi_A=0 \Rightarrow \varphi_A=-\omega\theta=-200\pi\times1,5.10^{-2}=-3\pi$

$\varphi_A=\pi$

$$d'où \begin{cases} y_A(t)=0 \text{ si } t<\theta \\ y_A(t)=4.10^{-3}(200\pi t+\pi) si\, t\geq\theta \end{cases}$$

3) $y_A(t)=y_s(t-\theta)$

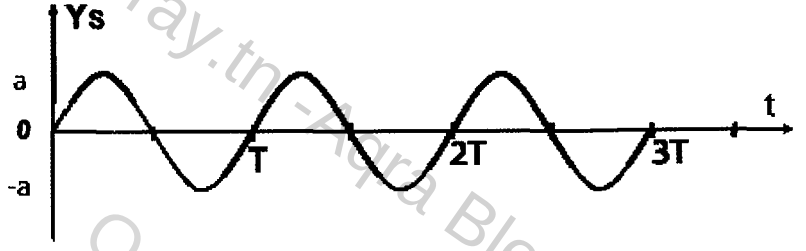
$y_s(t)=y_A(t+\theta)$

$=4.10^{-3}\sin(200\pi t+200\pi\theta+\pi)$

$y_s(t)=4.10^{3}\sin(200\pi t+\underbrace{200\pi\times1,5.10^{-2}}_{4\pi}+\pi)$

$$\Rightarrow y_s(t)=4.10^{3}\sin(200\pi t)$$

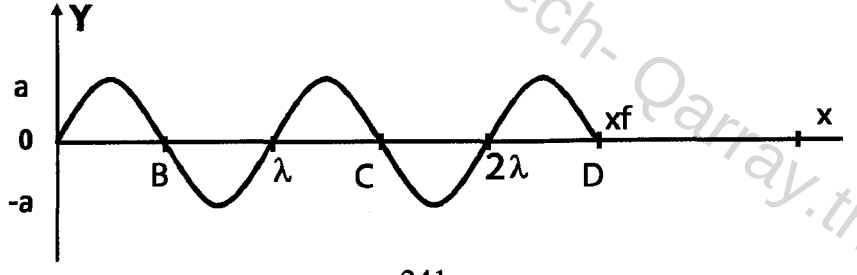
4) a-



b- $\varphi_A-\varphi_s=\pi \Rightarrow A$ est S vibrent en opposition de phase.

5) a- $x_F=V.t_1=8\times2,5.10^{-2}=20.10^{-2}m$

$\frac{x_F}{\lambda}=\frac{20.10^{-2}}{8.10^{-2}}=2,5\Rightarrow x_F=2,5\lambda$



Qarray.tn-Aqra Blech-Qarray.tn